

2014-15 MY CHEVROLET CRUZE DIESEL

*EPA Office of Transportation and Air Quality,
Compliance Division*

*National Vehicle and Fuel Emissions Laboratory
Ann Arbor, MI
July 15, 2016*



GENERAL MOTORS

CLASS ACTION COMPLAINT(S)

Class Action Complaint filed in Central District of California on June 22, 2016 by Hagens Berman regarding Chevrolet Cruze diesel certified to US EPA (and California Air Resources Board) regulations

Plaintiffs' counsel voluntarily dismissed this lawsuit July 6 without prejudice.

Plaintiffs' counsel re-filed the lawsuit July 7 in the Eastern District of Michigan. Factual allegations appear identical, but four new named plaintiffs were added.

87. Plaintiffs have tested the Cruze using a Portable Emissions Measurement System ("PEMS"). Testing revealed that the Cruze fails to meet U.S. emissions standards as promised.

CLASS ACTION COMPLAINT(S)

Specific emission performance claims:

In highway driving the Cruze averaged 128 mg/mile with a high of 557 mg/mile.

At speeds over 70 mph, the average was 231 mg/mile.

That's 1.8 to 8 times the federal standard.

At stop-and-go driving the average was 182 mg/mile with a maximum of 689 mg/mile, or 3.6 to 13.8 times the federal standard.

When tested at temperatures below 50°F, the NOx was 689 mg/mile and it appears the emissions control system stops working.

The same is true at temperatures over 85°F, where NOx rates were tested and ran at 450 to 550 mg/mile.

CLASS ACTION COMPLAINT(S)

Plaintiffs have not provided GM any details of their Portable Emission Measurement System (PEMS) testing. The only information we have is the summary of results included in the complaint.

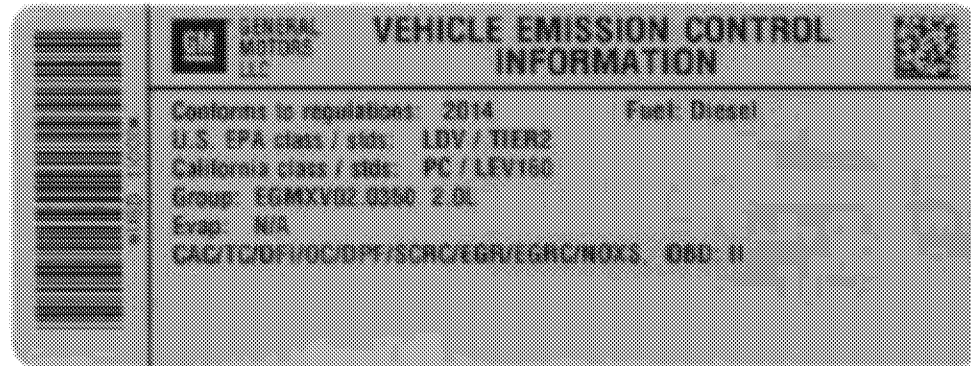
We know nothing about:

- Evaluations conducted: location(s), temperature, altitude, drive cycle(s)
- Methodology: equipment used for measurements, equipment calibration, data post processing and validation, repeatability
- Vehicles tested: applicability or relevance to the allegations, single vehicle or multiple vehicles, "state of health" of the vehicle(s), fuel used

2014-15 CHEVROLET CRUZE DIESEL

Chevrolet Cruze Diesel certified by EPA and CARB was planned, designed, developed, and validated by GM as a unique vehicle application to comply with US EPA and CARB vehicle emission regulations

- TIER2 BIN5 (150k) / LEV3 LEV160



2014-15 MY CHEVROLET CRUZE DIESEL EMISSION COMPLIANCE

GM has provided documentation and demonstrated compliance with US EPA and CARB vehicle emission regulations during certification, In-Use Verification Program testing, and EPA Surveillance program:

- "highway driving" during FTP (bag 2) and Highway FE Test at 75°F
- "speeds over 70 mph" during US06 at 75°F
- "stop-and-go driving" during FTP at 75°F and 20°F
- "at temperatures below 50°F" during FTP at 75°F and 20°F
- "at temperatures above 85°F" during SC03 at 95°F

2014 MY CRUZE DIESEL EMISSION CERTIFICATION DATA

Test Procedure	test temp		NMOG	CO	NOX	NMOG+NOX	NMHC+NOX	HCHO	CH4	N2O	PM
FTP	75°F	150K Standard (Bin 5)	0.090	4.2	0.07	--	--	0.018	0.030	0.022	0.01
		150K Standard (LEV160)	--	4.2	--	0.160	--	0.004	--	--	0.01
		150K EDV result	0.017	0.1	0.030	0.050	--	0.000	0.024	Compliance Statement	0.00
	50°F	standard	Exempt	Exempt	--	--	--	--	--	--	--
		EDV result	--	--	--	--	--	--	--	--	--
	20°F	standard	Exempt	Exempt	--	--	--	--	--	--	--
		EDV result	--	--	0.195	--	--	--	--	--	--
	75°F	150K Standard (Bin 5)	--	--	0.09	--	--	--	--	--	--
		150K Standard (LEV160)	--	--	--	0.160	--	--	--	--	--
		150K EDV result	--	--	0.002	0.006	--	--	--	--	--
US06	75°F	4K Standard (Bin 5)	--	8.0	--	--	0.14	--	--	--	--
		150K Standard (Bin 5)	--	11.1	--	--	--	--	--	--	--
		150K EDV result	--	0.0	--	--	0.036	--	--	--	--
SC03	95°F	4K Standard (Bin 5)	--	2.7	--	--	0.20	--	--	--	--
		150K Standard (Bin 5)	--	3.7	--	--	--	--	--	--	--
		150K EDV result	--	0.01	--	--	0.017	--	--	--	--
SFTP Composite	75, 95	4K Standard (Bin 5)	--	--	--	--	--	--	--	--	0.07
		150K Standard (Bin 5)	--	--	--	--	0.65	--	--	--	0.07
		150K Standard (LEV160)	--	4.2	--	0.120	--	--	--	--	--
		150K EDV result	--	0.05	--	0.033	0.03	--	--	--	0.00

AUXILIARY EMISSION CONTROL DEVICE (AECD) DOCUMENTATION

Auxiliary Emission Control Device (AECD) documentation, including descriptions of the overall engine and emission control systems, was reviewed extensively with EPA and CARB prior to certification

AECD document follows a "Parameters Sensed vs. Parameters Controlled" approach to describe modifiers which are not part of engine torque delivery. (Parameters Sensed vs. Parameters Controlled matrix included in Application for Certification)

AECD disclosure includes:

- Overall engine control strategies;
- Relevant emission control system enable and disable parameters;
- Control system modifiers throughout the operating ranges

COMPLIANCE STATEMENTS

FEDERAL AND CALIFORNIA EMISSION CONTROL SYSTEM CONTINUITY

Based on engineering evaluations of emission testing between 20°F and 86°F, there is no discontinuity in emission performance of NMOG, CO, NOx or HCHO as measured on the Federal Test Procedure in the temperature range of 20°F to 86°F for vehicles in this test group.

2014 MODEL YEAR

COMPLIANCE STATEMENTS

CALIFORNIA HIGH ALTITUDE CO EMISSIONS COMPLIANCE

Vehicles in this test group(s) are expected to comply with the FTP CO standards at high altitude because the fuel injection system meters fuel on air mass flow, compensating for altitude effects.

FEDERAL AND CALIFORNIA EMISSION CONTROL SYSTEM CONTINUITY

Based on engineering evaluations of emission testing between 20°F and 86°F, there is no discontinuity in emission performance of NMOG, CO, NOx or HCHO as measured on the Federal Test Procedure in the temperature range of 20°F to 86°F for vehicles in this test group.

CALIFORNIA VEHICLE EMISSION CONTROL LABEL (TUNE-UP) COMPLIANCE

GM asserts that the vehicle emission control label complies with the label durability requirements of the "California Motor Vehicle Emission Control and Smog Index Label Specifications", Title 13, CCR, Section 1965.

CALIFORNIA WARRANTY COMPLIANCE

GM asserts that the vehicles in this test group comply with the California warranty requirements of Title 13, CCR, Sections 2037, 2039 and 2039.

FEDERAL AND CALIFORNIA LBT+6% COMPLIANCE

Vehicles in this test group are expected to comply with the 0/FTP / LBT+6% requirement. Emission calibrations stoner than LBT+6% are to protect from emission control hardware failures, engine component failures, excessive coolant temperatures (not coolant enrichment) and piston scuff.

FEDERAL AND CALIFORNIA DIESEL FORMALDEHYDE EMISSIONS COMPLIANCE

Based on an engineering evaluation of formaldehyde emission test data, vehicles in this test group are expected to comply with the formaldehyde emission standards.

FEDERAL DIESEL-CYCLE METHANOL FUELED PARTICULATE MATTER EMISSIONS COMPLIANCE

Based on an engineering evaluation of the particulate matter emission test data, vehicles in this test group are expected to comply with the particulate matter emission standards.

FEDERAL HIGH ALTITUDE EMISSIONS COMPLIANCE

Based on an evaluation of high altitude emission test data, vehicles in this test group(s) are expected to comply with the FTP, evaporative and OBD standards at high altitude.

86.1844(8)(5)-EGMXXV02.0350

CBI / Ex. 4

2014 MY IN-USE VERIFICATION PROGRAM (IUVP)

Vehicle Number	Vin Number	Test Date (EPA 3)	Odo.	% of FTP NMOG or NMHC Std.	% of FTP NMOG+NOx Std.	% of FTP CH4 Std.	% of FTP CO Std.	% of FTP NOx Std.	% of FTP PM Std.	% of HWY NMOG+NOx Std.	% of HWY NOx Std.
ME20350L01	VIN / Ex. 6	08/05/2015	24,949	7%	30%	77%	3%	60%	6%	2%	3%
ME20350L02		08/08/2015	34,578	14%	28%	69%	2%	46%	11%	3%	6%

EPA IN-USE SURVEILLANCE PROGRAM

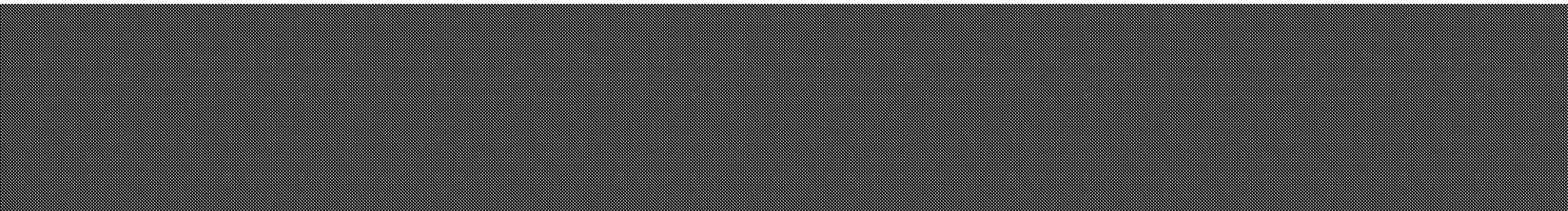
DECEMBER 2015

2014 MY CHEVROLET CRUZE DIESEL

Vehicle Number	Test Date	Odo.	% of FTP NMOG Std. <i>BIN5</i>	% of FTP NMOG+NOx Std. <i>LEV160</i>	% of FTP CH4 Std. <i>BIN5</i>	% of FTP CO Std. <i>BOTH</i>	% of FTP NOx Std. <i>BIN5</i>	% of FTP PM Std. <i>LEV160</i>	% of HWY NMOG+NOx Std. <i>LEV160</i>	% of HWY NOx Std. <i>BIN5</i>
W100-0106	12/11/2015	22,210	19%	44%	56%	2%	77%	1%	6%	10%
W100-0109	12/18/2015	41,399	15%	48%	50%	2%	90%	1%	2%	3%
W100-0036	12/17/2015	28,518	42%	51%	56%	3%	62%	0%	2%	3%

2014-15 MY CHEVROLET CRUZE DIESEL EMISSION COMPLIANCE

GM believes the Chevrolet Cruze Diesel complies with all applicable
US EPA and CARB vehicle emissions regulations



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